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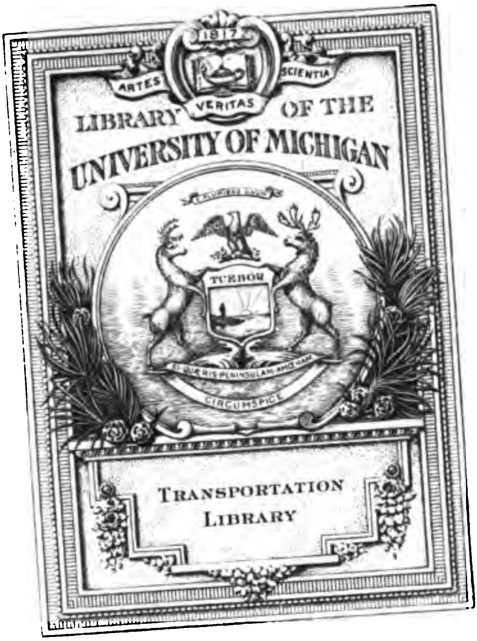

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LETTER

TO THE

RIGHT HON. THE EARL OF RIPON,

PRESIDENT OF THE BOARD OF TRADE, &c. &c.

ON THE

COMPARATIVE SAFETY

OF

STEAM-BOAT & RAILWAY TRAVELLING.

BY

GABRIEL H. LANG, ESQ.

GLASGOW: JOHN SMITH & SON.
EDINBURGH: WILLIAM BLACKWOOD & SONS.
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LETTER

TO THE

RIGHT HON. THE EARL OF RIPON,

PRESIDENT OF THE BOARD OF TRADE, &c. &c.

THE Act, 3d and 4th Victoria, commonly called Lord Seymour's Act, has, on the preamble of its being necessary for the public safety, vested a certain control over Railways in the Board of Trade. This Act requires,

1st, That no Railway shall be opened for the public conveyance of passengers, until one month after notice to the Board of Trade.

2d, That every Railway Company shall make a return to the Board of Trade, of their traffic in passengers, and of all accidents attended with personal injury, under a penalty of £20 for each day they neglect to deliver such return.

3d, That the Board of Trade may appoint persons to inspect Railways, and the engines and carriages belonging thereto.

4th, That any special constable may seize any engine-driver, or other servant of a Railway Company, who shall be found drunk while employed upon the Railway, or who shall do, or omit to do, any act whereby the life or limb of any person shall, or might be, injured or endangered, and carry such offender before some Justice of the Peace.

Lord Seymour's Act received the Royal assent on 10th August 1840. I shall afterwards show, that the accidents upon Railways in 1841, were fewer than they had been in 1840; yet, in 1841, Mr. Labouchere introduced a Bill, having for its preamble, that it was necessary for the safety of the

E.S.K. 6-19-44

public, to provide *for the further supervision of Railways.* This, however, did not pass into a law.

I believe it will be found, that in 1842 the accidents upon Railways bear a still smaller proportion to the number of persons travelling upon them; yet Mr. Gladstone has this session introduced another Bill, declaring, that it is necessary for the public safety to make *still further provision for the supervision of Railways*, and to impose still more stringent penalties than were provided by Lord Seymour's Act.

I do not intend to discuss the propriety of these measures, but will limit myself to an inquiry into the comparative safety of the different modes of travelling by steam; and I trust your Lordship will pardon the liberty I take in making a few observations to prove that Railways, so far from requiring a peculiar stringency of legislation, on the ground of excessive danger, are, on the contrary, the safest of all modes of conveyance.

The return made to the Board of Trade, of every accident occurring upon Railways, appears to me to be a salutary regulation, although the publication of these returns in an annual report, is apt to create an unfounded and unreasonable alarm. Similar reports are not required on Steam-vessels; and an idea has thence arisen, that Railways are attended with great loss of life, and require strict supervision,—while Steam-vessels are attended with little loss of life, and do not require any supervision. I believe a brief examination into the history of travelling by steam, will prove both positions to be wrong.

Previous to the passing of Lord Seymour's Act, the accidents upon Railways had been few in number, and attended with comparatively little loss of life. The preamble, therefore, in declaring that it was necessary for the safety of the public, proceeded more on an assumption of coming danger, than on an experience of the past.

I shall now state a few well-ascertained facts, from which the public will be enabled to judge, how far the history of Steamboats, prior to 1840, had established their claim to be regarded as a safer conveyance than Railways.

In 1817 the Norwich Steamer exploded, when nine persons were killed, and many severely injured;—the engine being non-condensing, and the boiler cast-iron. A petition was presented to Parliament on the subject, and a Select Committee appointed to consider of the means "*of preventing the mis-" "*chief of explosions from happening on board of Steam-boats,*" "*to the danger or destruction of His Majesty's subjects on*" "*board of such boats.*" This Committee, after examining evidence, reported (24th June 1817), "*that a consideration*" "*of what is due to public safety has established the principle,*" "*that where safety may be endangered by ignorance, avarice,*" "*or inattention, against which individuals are unable, either*" "*from the want of knowledge or of power, to protect themselves,*" "*it becomes the duty of Parliament to interfere;*" and the Committee resolved, "*that the Chairman be directed to move*" "*the House, that leave be given to bring in a Bill for enforcing*" "*such regulations as may be necessary for the better manage-*" "*ment of Steam-packets, and for the security of His Majesty's*" "*subjects who may be passengers therein.*"

No Bill, however, was introduced; and it appears, from the Report of the Commissioners on the Steam-vessels' Inquiry, to be afterwards noticed, that

2 Steamers foundered,
3 were destroyed by collision,
6 were destroyed by fire,
8 were wrecked,
9 were destroyed by explosions,

and some hundred persons lost their lives, before the subject was again brought before Parliament. Among many accidents that happened during this period, I may instance the collision on the River Clyde, between the Steamers Ayr and Comet, when the Comet sunk, and 62 persons were drowned; the wreck of the Frolic Steamer on the Naas Sands, when all on board, number unknown, perished; the foundering of the Venus at sea, from the breaking of the engine, which plunged through the bottom of the vessel, when six persons were drowned; and the explosion of the Graham Steam-packet, at Grimsby, when six lives were lost, and many persons injured. The attention of Parliament, however, was not arrested, till another still more dreadful disaster occurred.

On the 17th August 1831, the Rothesay Castle Steam-packet, from Liverpool to Beaumaris, was wrecked on the Dutchman's Bank, near Beaumaris, and 119 lives were lost. Numerous petitions were again presented to Parliament, and a Select Committee of the House of Commons appointed "*to take into consideration the frequent calamities of Steam* "*Navigation, and the best means of guarding against their* "*recurrence.*" This Committee, after examining witnesses, reported, that in order to afford protection to the lives and property of His Majesty's subjects, they felt themselves called upon to recommend, that all vessels propelled by steam should be subjected to certain regulations; and they recommended that all Steam-vessels should be licensed, and periodically examined, and certified to be sea-worthy; and in order to lessen the risk of collision, that an universal "rule of the road" should be established by law.

These recommendations were again disregarded; and it appears, that

3 Steam-vessels foundered,
8 were destroyed by fire,
9 were destroyed by collision,
8 were destroyed by explosion,
18 were wrecked,

and several hundred persons were sacrificed, in the great majority of cases, from unseaworthy vessels or mismanagement, before the matter again attracted notice. I may select from the sad catalogue during this second period, the case of the Erin Steam-packet from Dublin to London, which foundered, and all on board, number unknown, perished;—the Lord Blayney, which was wrecked the same year, on Hoyle-Bank, Liverpool Bay, when all on board perished, supposed to be 64;—the Killarney, which was wrecked on the coast of Ireland, from defective boilers and engines, and 29 persons lost;—the Superb, which foundered in the following year, when all on board, number unknown, perished;—the Earl Grey, which exploded in the Clyde, when 10 lives were lost, and many persons seriously injured;—the Union, which exploded at Hull, when 24 were killed, and many much injured;—and the Victoria, which exploded twice in the Thames, killing 14 persons. All these had passed unheeded, till two accidents happened within a few days of each other, of such magnitude, and attended with a loss of life so appalling that they could not be overlooked.

On the 7th September 1838, the Forfarshire Steam-vessel, from Hull to Dundee, was wrecked on the Fern Islands, and 45 persons lost their lives. And on the 11th of October following, the Northern Yacht, from Newcastle to Leith, foundered, and all on board, number unknown, perished.

These wrecks spread a general alarm; and the Board of Trade, on the 2d of January 1839, issued the following letter of instructions to Captain Pringle and Josiah Parkes, Esq. —"*In consequence of numerous communications made to Her* "*Majesty's Government, of the frequency of Steam-boat acci*"*dents, and from reports of the expediency of some Legislative* "*measure, to secure the public, as far as possible, against the* "*loss of life and property occasioned thereby,—the Lords of* "*the Committee of Privy Council for Trade, consider it ad*"*visable to institute an inquiry into the causes of such acci*"*dents, and the means of preventing the recurrence of them.*" They were accordingly directed to inquire,

1st, The number and nature of the accidents which have happened in Steam-vessels, within the last ten years, as far as can be ascertained; and

2d, The practical means of preventing the recurrence of accidents.

The Commissioners reported (29th May 1839), that in the absence of any official record, or register of disasters peculiar to Steam-vessels, they could only have recourse to the knowledge and recollection of individuals;—that such sources of information were necessarily imperfect, as it was not to be expected that the owners of Steam-boats would willingly disclose the losses they had sustained. They accordingly presented the schedule of accidents which had occurred to life and property on board of Steam-vessels, "*as only an* "*approximation to the real number of accidents.*"

From an abstract of 92 accidents, it appears that

40 Steam-vessels were wrecked and foundered,
23 exploded,
17 were burned, and
12 were destroyed by collision.

The greatest number of lives lost at any one time,

From wreck, was	119
From collision,	62
From explosion,	24

And it is impossible to peruse the evidence laid before the Commissioners, without feeling satisfied that a large proportion of the Steam-boat disasters might have been avoided, and many lives might have been saved, had the recommendations of the Select Committees of 1817 and 1831 been enforced by statute. Of this, many examples might be given.

Drunkenness and incapacity of the captain and mate, and unseaworthiness of the vessel, were found, on the Coroner's inquest, to have led to the loss of the Rothesay Castle; and the ship-builders who had repaired her shortly before the accident, stated, that "*no one acquainted with her state would* "*have sailed in her.*"

In the case of the Forfarshire, the Coroner's inquest, and the evidence afterwards obtained, on an investigation into the case by Government, established the fact, that the primary cause of the wreck was the defective state of the boilers and the mismanagement of the vessel; as, even in her greatest peril, she might probably have been saved by her anchors, had the cables not been foul, so that the anchors could not be let go.

The Northern Yacht was proved, in the evidence led by the Commissioners, to have been of the very worst description of hull that ever issued from any dockyard, and an authorised inspection of that vessel would probably have prevented her from ever being sent to sea; as it was fully proved that the loss of this vessel was owing to the unseaworthiness of the hull and boilers for many weeks prior to her foundering, "*the boilers having been plugged with wedges of wood and white* "*lead.*"

The case of the Abbey was still more flagrant. The Commissioners report " That the expedients resorted to for "diminishing or stopping the leakage of the boilers, would "scarcely have been credited, had they not been substan- "tiated by the evidence given; nor could we have ventured to "state our own knowledge of the frequency of the practice of "applying similar, and many other species of temporary stop- "gaps, to marine boilers, had not our assertions been corrobo- "rated by such facts as will be found in the evidence adduced "on the cause of the loss of the Abbey. *The leaks of the "boilers were attempted to be stopped by mixtures of horse-dung, "old ropes, and hemp;* and she went to sea with numerous de- "fects of hull, machinery, and equipment."

There is another serious risk to which steam travellers by water are liable, and which calls, in a peculiar degree, for Legislative interference. I allude to collisions. These occur so frequently, and are often so fatal to life, that the want of a law to diminish the evil is a subject of general complaint. They commonly arise from the absence of an universal understanding, as to "the rule of the road," to be observed by vessels in meeting and passing each other, and from the absence of an universal system of night-lights and signals.

The practice is at present regulated only by custom, or the bye-laws of different ports; which custom and bye-laws being various, lead to serious casualties. For example, by the rules of the Trinity House of Hull, for regulating navigation by steam in the Humber, Ouse, and Trent, vessels meeting are enjoined to starboard their helms; while, by the rules enforced in the ports of Tyne, vessels are required to port their helms. *If, then, two steamers belonging to the Humber and the Tyne meet, and attempt to pass, if they act according to the rules of their respective ports, they will probably steer into, instead of away from, each other.* Nothing can show, in a stronger point of view, the necessity for reducing these conflicting usages to an uniform system, by positive enactment.

I have thus given a hasty and imperfect sketch of the state of matters, prior to 1840, when the Act for Regulating Railways passed. Every fact I have stated was proved in Parliament, before Lord Seymour introduced his Bill; and they appear to me to establish, that the elements of danger were more abundant in Steam-vessels than upon Railways, that the actual amount of personal injury and loss of life was greater, and that a large proportion of the accidents might have been avoided had proper legal remedies been provided. If, then, the rule by which Legislative protection to the public should be measured, is the extent of danger to be guarded against, it is difficult to see why Railways should have been subjected to regulations, from which Steam-vessels were exempted.

I shall now take an equally rapid glance at the progress of steam travelling by land, since the passing of Lord Seymour's Act.

It appears, from the returns made to the Board of Trade of the aggregate traffic upon Railways, that during the half-year from 1st January to 1st July 1841, 9,122,000 passengers travelled upon the various Railways of the United Kingdom. It also appears, from a table showing the nature of the traffic on a number of lines, that the average distance travelled by each passenger is about 20 miles. Now, on analysing the returns of accidents for the same period of six months, I find 30 persons lost their lives. These consisted of,

Passengers who were killed from causes beyond their own control,	3
Passengers who suffered from their own folly, negligence, or misconduct, ...	2
Total number of passengers killed, ...	5
Trespassers on the line of Railway, ...	5
Engineers, servants, labourers, & workmen on the line of Railway,	20
Total killed in six months, ...	30

The number of passengers travelling was 9,122,000; the distance travelled, 182,440,000 miles; and the number of passengers killed from causes beyond their own control was 3. There was, therefore, one passenger killed out of each 3,040,666 passengers; or, in other words, one passenger lost his life for each 60,813,333 miles travelled.—Contrast this with stage-coach travelling. A Railway traffic of 9,122,000 persons, each travelling 20 miles, is equivalent to a stage-coach, with ten passengers per day, travelling an equal distance daily for 2,500 years. If, then, stage-coaches were attended with as little personal injury to the public as Railways, the following would be nearly the proportional number of accidents:—

The number of passengers killed from causes beyond their own control,.. *one in* 833 *years.*
The number killed from their own folly, negligence, or misconduct,.. *one in* 1,250 *years.*
The number of persons run over on the public road, *one in* 500 *years.*
The number of coachmen, guards, ostlers, and other servants of the coach,.................................. *one in* 125 *years.*

Any person may satisfy himself of the accuracy of these figures; and I believe a more triumphant proof could not be presented of the extraordinary superiority of Railways, in point of safety, over stage-coaches.

It is almost equally unnecessary to draw a parallel between Steam-boats and Railways. I have no access to any official return of Steam-boat accidents from January to July 1841. This, however, is the less necessary, as there occurred during that period a few disasters, which are not likely to be soon forgotten. I may instance—

1841,
Jan. 18, The Thames Steamer from Dublin to London, wrecked in English Channel, when .... 65 perished.
Feb. 20, The Governor Fenner run down off Holyhead, by the Nottingham Steamer, when............... 122 perished.
March –, The President Steam-ship, foundered, with all on board, when it is supposed........................ 120 perished.

There were numerous minor casualties during this period, to which I need not advert, as the above are unfortunately more than enough to prove my position. My reason for not extending the parallel farther, is, that the Report of the Railway Officers does not give the Railway traffic or number of passengers beyond July 1841. If, however, it were necessary for the argument to prolong the fatal catalogue for the remainder of 1841, there are abundant materials. A small Steamer was run down and sunk in the Frith of Forth; the Solway Steamer sunk in the Solway Frith, with above 100 passengers on board, who were with difficulty saved; the

William Huskisson foundered in St. George's Channel, when a number of passengers (number never ascertained) were drowned; the City of Bristol Steamer foundered in the Bristol Channel, and all on board perished, except one. These, and many other Steam-boat disasters, all happened in the year 1841.

I believe, however, I could not give a better instance of comparative safety, than is afforded by the intercourse between Glasgow and Greenock.

In the first year after the opening of the Glasgow, Paisley, and Greenock Railway, the number of persons travelling was 872,665; and there was not a single passenger received the smallest injury.

There are no means of ascertaining the exact number travelling on the River Clyde by Steam-boats, but it is supposed they amount to from three to four hundred thousand per annum. I have no list of the accidents on the River for the last year; but there are two of recent occurrence, *viz.*—on 21st March 1842, the boiler of the Telegraph, a small River Steamer, with a non-condensing or high-pressure engine, exploded, killing 18 persons; and on 18th May 1842, two passengers landing from a Steamer at Renfrew were drowned.

Nearly a million of passengers, therefore, travelled on the Railway without accident, while 20 lives were lost upon the River within a few months; and I am satisfied, if an exact list were compiled of all the lives lost on the River Clyde, and adjacent waters, by Steam-boat accidents, by collisions, explosions, and swamping of small boats, they would amount to a very startling aggregate.

There is another circumstance which should not be overlooked. All the passengers who lose their lives in Steamers, perish from causes wholly beyond their own control; whereas, a large proportion of those who are killed upon Railways, suffer from their own folly, negligence, or misconduct. It will perhaps scarcely be credited when I state, that of the serious accidents reported to the Board of Trade, *twenty-two happened to persons who jumped off, when the carriages were going at speed, generally after their hats; and five persons were run over when lying either drunk or asleep upon the rails.*

Indeed, after contemplating the sad picture of Steam-boat casualties, it almost provokes a smile to turn to the schedule of Railway accidents, from which I may present a few extracts:—

DATE. 1841.	NAMES OF PERSONS INJURED.	DESCRIPTION OF INJURY.
6th Feb.....	Samuel Long,........	Cut and bruised about the hand.
12th Feb.....	George Paton,.......	Very slightly cut about the head.
20th March,	John Wilson, ...	Right hand seriously bruised, but no bones broken.
11th June,...	James Spindle,......	Slightly bruised.
14th July, ...	William Harris,.....	Two of his fingers badly cut.
7th Sept....	——— Turner, ...	Face slightly cut.
—	John Eccles, ...	Slight general concussion.
27th Oct.....	Samuel Hargreaves,	A severe shake.
17th Nov. ...	Thomas Duncan,....	A sprained knee.
—	Thomas Rolfe,.......	A cut on chin.

This, then, shows the consistent care taken by the Legislature of the public safety. *If* 100 *passengers perish in a Steam-boat, no return is necessary, and no inquiry is made: they are consigned to the deep, and to oblivion at the same time. But if a Railway passenger gets a cut on his finger, a sprained knee, or a severe shake,* this must be reported to the Board of Trade, under a penalty of £20 for each day the return is withheld.

The catastrophe on the Versailles Railway is too dreadful to be passed without notice. It may, however, be ascribed, in a great measure, to French inexperience in Railway matters; and the accident had its origin in causes not in operation in this country. There is, therefore, little reason to fear the occurrence here of a similar calamity. Besides, if we are to call to our aid, in this inquiry, the experience of Foreign countries, America is the quarter from which we can derive most assistance, as that country is only second to Great Britain in the extent to which travelling by steam is carried.

The subject has repeatedly engaged the attention of the American Legislature. In 1832, the frequent occurrence of Steam-boat accidents induced the Government of the United States to institute an inquiry into the causes of Steam-boat explosions, and the best means of preventing them; from which it appeared that 52 Steamers had at that time been destroyed by explosion alone, and 256 persons had lost their lives. Of these accidents, 27 happened to low-pressure engines, 13 to high-pressure, and 12 to engines of which the class was not ascertained. It is evident, therefore, that the danger of explosion, is at least as great in low pressure, as in high pressure engines. The returns also showed an annual increase in these disasters—the number of explosions, in 1830 alone, being 14, by which 121 persons were killed.

In 1838, the subject was again brought before Congress, when they "resolved, that the Secretary of the Treasury be "required to collect, and report to Congress, all the informa-"tion that can be obtained as to the use of Steam-engines in "the United States, and the accidents, and loss of life and "property, which have attended their use." Mr. Levi Woodbury, the Secretary of the Treasury, presented his report on 12th December 1838, in which he states, that the number of Steam-boats in the United States was estimated at about 800. He does not give the extent of Railways; but I find, from another return made to Congress, that in 1837 there were 1652¼ miles of Railway in operation, and 2760 miles in progress. Mr. Woodbury states the ascertained number of Marine Steam-engines, to be 700; and the number of accidents, by explosion and other disasters, to have been 215. The number of Locomotive engines to be 337; and the number of accidents 28,—and only 2 accidents in Locomotives were by explosion of the boiler. The result therefore is, *that in an equal number of Marine and Locomotive engines, nearly four accidents happened to Marine engines, for one accident to Locomotives.*

Mr. Woodbury states, that the greatest loss of life, on any one occasion, in a Steam-boat,

From collision, was in the case of the Monmouth, in 1837, when.......... 300 perished;
From explosion, in the case of the Oronoka, in 1838, when.......... 130 perished;
From shipwreck, in the case of the Home Steamer, when.......... 100 perished;
From fire, in the case of the Ben Sherrod Steamer, when.......... 120 perished.

The number of lives lost by all the disasters in Steam-boats in the United States, is computed by Mr. Woodbury to have been about 2,000; though he states that some think the aggregate amounts to 6,000. He reports, however, that he had been able to ascertain *only* 1676 killed in Steam-boats; and 37 killed by accidents to Locomotives and Standing engines. It appears, therefore, *that in an equal number of Marine and Locomotive engines, there were upwards of* 22 *persons killed by Marine engines, for one killed by Locomotives.*

This extraordinary difference in the amount of personal injury, caused by Marine and Locomotive engines, must be attributed, in some degree, to the fact, that there is no competition or racing upon Railways, that the engines rest steadier, and the supply of water is more uniform and regular. The chief cause, however, undoubtedly is, that engineers on Locomotive engines are the most exposed to danger, and have been the most frequent victims; and, consequently, exercise increased care.

I have thus endeavoured to show, that not only before, but also since, the passing of Lord Seymour's Act, Steam-boat travelling has been attended with greater personal injury and loss of life, than travelling by Railways. I shall now inquire very shortly, whether, judging from the past, we have any grounds for forming an opinion whether the safety of Railway and Steam-boat travelling, is likely to increase, or to diminish.

From the returns of accidents on Railways, attended with personal injury to the public, arising from causes beyond the control of passengers, it appears, that in five months of 1840, *viz.* from 1st August to 31st December, there were 22 killed, equal for a year to about 53 killed. This number, however, includes engineers and conductors of Railway trains, trespassers, and persons run over on the line.

I have no means of ascertaining the number of Railway passengers for 1840; but it appears from the Stamp-office returns of mileage-duty, that the passenger traffic of 1841 exceeded that of 1840 about 70 per cent. If, then, the accidents of 1841 had borne the same proportion to the number of passengers, as the accidents of 1840 did to the passengers of that year, the killed would have amounted to 90. Instead of this, the number killed by accidents arising from causes beyond the control of passengers in 1841, was 24; of which number only 16 were passengers, and the rest were engineers, conductors, trespassers, and persons run over on the line. While, therefore, the number of passengers had increased 70 per cent. the casualties, instead of rising in an equal ratio, had diminished 55 per cent.

The Report of the Railway department states, that most of the casualties arose from mismanagement or defective arrangements, *but that this class of accidents is rapidly diminishing*, which "may be attributed partly to the beneficial results of "more extended experience, and of the measures taken by "several Railway Companies to raise the character of that "important class of men, the Engine-drivers, and partly to the "salutary example of the prosecutions which have been insti-"tuted under Lord Seymour's Act."

The history of Steam-boat travelling unfortunately shows a very different result. The Report of the Commissioners appointed by the Board of Trade, states, that "*our schedule* "*exhibits an annual increase of disasters*, and shows, that "nearly the half of them has occurred within the last three "years, and that from the beginning of 1838 to the date of "the Report (1839), a period of only fifteen months, no fewer "than 22 accidents have happened; they consist of

"11 cases of wreck, foundering, or imminent peril,	117 lives lost.
8 explosions,	20 do.
and many persons injured.	
2 collisions,	
1 fire,	
Total,	137 lives lost."

It appears, therefore, that notwithstanding the comparatively short experience of Railways, and the immense increase of traffic upon them, the accidents are rapidly decreasing; and as the roads become more consolidated, and the engineers and conductors become more experienced, it is probable that the ratio of accidents will continue to exhibit a progressive diminution.

In Steam-boats, on the contrary, after nearly thirty years' experience, the accidents are increasing. Competition will sooner or later arise between Railways and River Steamers. This will lead to cheap and insufficient boats and machinery; and in order to increase their speed, the engines will be wrought with steam at too great pressure. All such experiments are replete with danger; and, it is to be feared, the result will be found in a gradually increasing amount of disasters.

In America, France, Holland, and Belgium, Steam-vessels are subject to regulations which are considered essential to the public safety. In Great Britain, Railways and Stage-coaches are subject to constant inspection. Merchant-vessels are compelled by Act of Parliament (4 Will. IV. c. 53) to undergo survey, previous to being permitted to take out emigrants. Merchant-vessels carrying cargo are compelled by self-interest to register in Lloyd's, and to submit to the periodical surveys required by the rules of that society. The same principle of self-interest induces the Steam-vessel owner to register a new vessel; but when that vessel is no longer worthy of a character, and when the owner knows he can no longer obtain a good reputation for his vessel at Lloyd's, he discontinues his surveys *at the very time when a survey is most necessary for the safety of the public.*

In 1839, there were 25 registered and 26 unregistered Steamers plying in the Humber, Ouse, and Trent; and at Liverpool there were 39 registered and 37 unregistered Steam-vessels.

Every interest in the kingdom, therefore, seems to be under the especial protection of the Legislature, except that of Steam-boat passengers; but they are beyond the pale, and any adventurer may, with impunity, equip and send to sea, a Steamer of the most crazy build, and with engines of the most dangerous construction. This is no imaginary danger. Messrs. Curling & Young, the celebrated ship-builders in London, stated, in the Steam-vessels' Inquiry, that they had little hesitation in expressing their conviction, that many of the vessels now employed in steam navigation, are, from want of strength in their original construction and fastenings, or from defects caused by age, accident, or wear and tear, in a state hazardous to the safety of person and property that may be embarked in them. They state, that they had seen vessels, presenting to superficial view every appearance of beauty and efficiency, that were in fact so slightly built and insufficiently fastened, that no accident that could have occurred, would have surprised them. That in some, materials of inferior description were employed; in others, the connection of the parts was ineffective, the fastening injudicious or scanty, or the workmanship negligent. "*But defects of timber are concealed by planking; defects of planking by cabin fittings; and "defects of all by painting and decoration,—which reduce all "to one level of appearance, and by this appearance the public "is deceived and its safety compromised.*"

This state of matters calls for a remedy, not only for the safety of the public, but also for the protection of the fair trader, against the unscrupulous rivalry of boats such as those described by Messrs. Curling & Young, and which, I fear, are a more numerous class than is generally imagined.

These observations have extended to greater length, and have embraced a wider range than I at first contemplated. It may be of use, therefore, to sum up, in a few words, the propositions which it has been my aim to establish.

1st, That the history of travelling by steam, both in Great Britain and in Foreign countries, had proved, prior to the introduction of Lord Seymour's Bill, that passengers by Railway were exposed to less risk of personal injury than passengers by Steam-boats.

2d, That since the passing of Lord Seymour's Act, notwithstanding the increase in the number of passengers by Railways, the number of accidents to Railway passengers has diminished, while the number of accidents to Steam-boat passengers is increasing.

3d, That where Steamers come into direct competition with Railways, there is a tendency, arising from obvious causes, that the ordinary risks of steam navigation should increase.

It appears to me, that these points are established by the facts already stated. Many remedies have been suggested, but it is a subject which should be approached with caution; for, while it is the duty of Parliament to watch over and provide for the public safety, care must be taken not to encumber with legislation this highly important branch of our marine.

I can scarcely venture to express an opinion how this middle course should be steered; but it humbly appears to me, after having given the subject some consideration, that the following measures would not prove onerous or detrimental to the owners of Steam-vessels—would give increased confidence to the public—and would at least obviate some of the dangers to which life and property are now exposed.

1st, That all Steam-vessels should be registered and classed.

2d, That the conflicting usages of different Ports, as to the manner in which Steam-vessels meeting should pass each other, should be abrogated, and an uniform "rule of the road" fixed by the authority of Parliament.

3d, That an uniform system of night-lights or signals should be established.

4th, That Steam-vessels should be embraced within the operation of Lord Seymour's Act, rendering it imperative on them to make a return of all accidents attended with personal injury, in the same manner as is done by Railways.

5th, That the engineers and crews of Steam-vessels should be subjected to the same penalties for drunkenness or misconduct, as the engineers and conductors of Railway trains.

A Legislative enactment to this extent, could not be productive of anything but good; and although it might not confer on the public the full measure of protection to which they are entitled, it would, at least, remove some of the anomalies which are still to be found in the maritime code of this country.

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